Publication No. 1F2730
Catalog No. 885 4028
31OCT02

INSTALLATION INSTRUCTIONS
for the
MAGAZINE INTERFACE BOARD A4
on the
Kodak X-Omat MULTILOADER 300/300 PLUS
Service Codes: 3058/3511
Kodak X-Omat MULTILOADER 7000
Service Code: 3444
Kodak MINILOADER 2000/2000P
Service Codes: 3477/3479

Important
Qualified service personnel must install this kit.

HEALTH IMAGING

Confidential
Restricted Information
© Eastman Kodak Company, 2002

PLEASE NOTE The information contained herein is based on the experience and knowledge relating to the subject matter gained by Eastman Kodak Company prior to publication.

No patent license is granted by this information.

Eastman Kodak Company reserves the right to change this information without notice, and makes no warranty, express or implied, with respect to this information. Kodak shall not be liable for any loss or damage, including consequential or special damages, resulting from any use of this information, even if loss or damage is caused by Kodak's negligence or other fault.

This equipment includes parts and assemblies sensitive to damage from electrostatic discharge. Use caution to prevent damage during all service procedures.

MAGAZINE INTERFACE BOARD A4 includes:

Part No.	Description	Quantity
4283941	SCREW	1
9310981	SPACER	1
1F2730	INSTALLATION INSTRUCTIONS	1
SP9402781	MAGAZINE INTERFACE BOARD A4	1

Installing the Kit

[1] Determine the type of equipment:

MULTILOADER 300/300 PLUS	MINILOADER 2000/2000P	MULTILOADER 7000
Continue to Page 3.	Continue to Page 6.	Continue to Page 9.

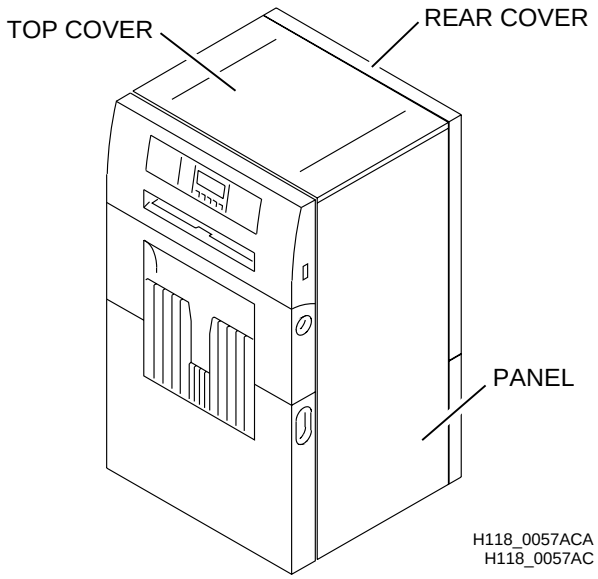
In a MULTILOADER 300/300 PLUS

Important

If a MULTILOADER 300 has OPERATING and BOOTSTRAP SOFTWARE that is less than V4.0 installed, it must be upgraded.

[1] If necessary, install new software:

Version	Part No.
Modification No. 52 includes: • BOOTSTRAP EPROM, V4.0 • OPERATING SOFTWARE, V4.0	9229220



Warning

Dangerous Voltage

[2] De-energize the MULTILOADER.

Important

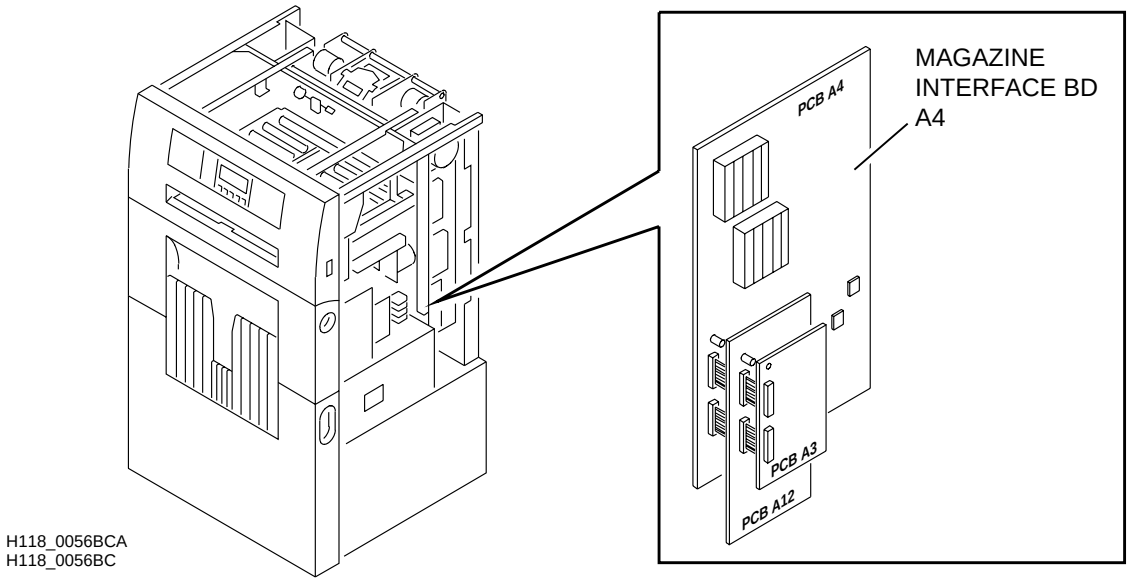
Do not discard the SCREWS and RETAINING RINGS.

[3] Remove:

- TOP COVER
- PANEL
- REAR COVER

Note

See SERVICE MANUAL SM3058-6.



[4] Locate the existing MAGAZINE INTERFACE BOARD A4.

[5] Disconnect from the MAGAZINE INTERFACE BOARD A4:

- CABLES
- CONNECTORS

Caution

Prevent damage to the POWER SUPPLY.

[6] Use a sheet of paper to cover the opening to the POWER SUPPLY.

Important

Do not discard the hardware.

[7] Remove and discard:

- BOARD A3
- BOARD A4
- BOARD A12 - if a *Kodak* MULTILOADER DARKROOM FILM FEEDER is installed
- DFF-Y CABLE

[8] Install the new MAGAZINE INTERFACE BOARD A4 using the existing hardware.

[9] Connect the following to the MAGAZINE INTERFACE BOARD A4. See the figure on Page 12.

- RS-232 CABLE to A12X16 - if a DARKROOM FILM FEEDER is installed
- CABLES
- CONNECTORS

Important

- ON and OFF positions might be reversed because some S1 DIP SWITCHES were installed backward on the old MAGAZINE INTERFACE BOARD A4.
- DIP SWITCH 3-4 is not used.

[10] Set the DIP SWITCHES. See the figure on Page 12.

MULTILOADER	Settings for DIP SWITCHES									
	S1-1	S1-2	S1-3	S3-1	S3-2	S3-3	S4-1	S4-2	S4-3	S4-4
300	See Note	See Note	OFF	ON	OFF	ON	OFF	OFF	OFF	OFF
300 PLUS	See Note	See Note	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF

Note

Use the same setting as on the old MAGAZINE INTERFACE BOARD A4.

[11] Set the JUMPERS for SENSOR B35:

From:	To:
A4X3	1-2
A4X34	1-2
A4X35	1-2

Warning

Dangerous Voltage

[12] Energize the MULTILOADER.

Important

It might not be necessary to download all the OPERATING SOFTWARE to the MULTILOADER.

[13] Determine which software to download using the LAPTOP COMPUTER:

Correct BOOTSTRAP EPROM SET	Correct OPERATING SOFTWARE	Install New Software in:			Install EPROMS
		SYSTEM	MAGAZINE	CASSETTE	
Yes	Yes	No	Yes	No	No
Yes	No	Yes	Yes	Yes	No
No	No	Yes	Yes	Yes	Yes

[14] Check for the correct value of the phase current. See “Checking the Operation” on Page 11.

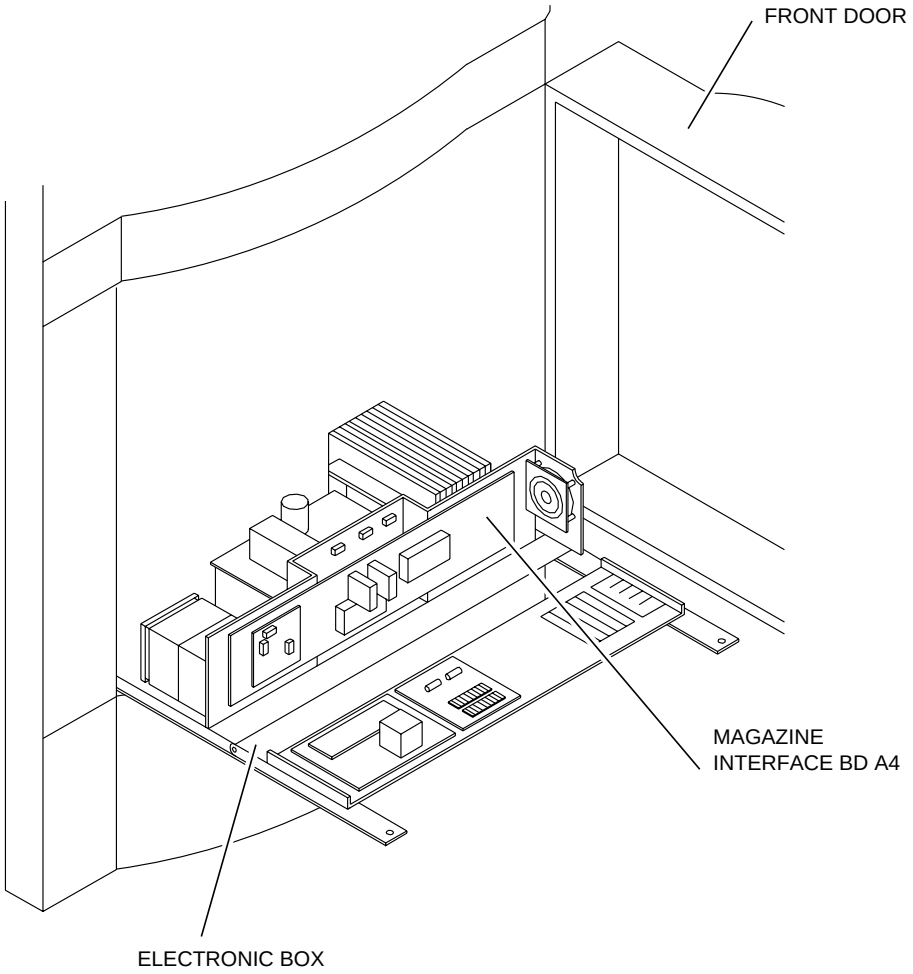
In a MINILOADER 2000/2000P

[1] Check the version of OPERATING SOFTWARE installed in the MINILOADER 2000/2000P.

Warning

Dangerous Voltage

[2] De-energize the MINILOADER.



H191_0012DCC
H191_0012DC

[3] Open the FRONT DOOR.

[4] Pull the ELECTRONIC BOX forward.

[5] Locate the existing MAGAZINE INTERFACE BOARD A4.

Note

See SERVICE MANUAL SM3477-1.

[6] Disconnect:

- CABLES
- CONNECTORS

[7] Remove and discard:

- SCREW
- SPACER
- BOARD A4
- BOARD A3

[8] Install the new MAGAZINE INTERFACE BOARD A4.

(a) Install the new SPACER on the new SCREW.

(b) Insert the SCREW through the new MAGAZINE INTERFACE BOARD A4 and into the center hole at the top.

[9] Connect to the new MAGAZINE INTERFACE BOARD A4:

- CABLES
- CONNECTORS

Important

- ON and OFF might be reversed because some S1 DIP SWITCHES were installed backward on the old MAGAZINE INTERFACE BOARD A4.
- DIP SWITCH 3-4 is not used.
- JUMPERS A4X3, A4X34, and A4X35 are not used.

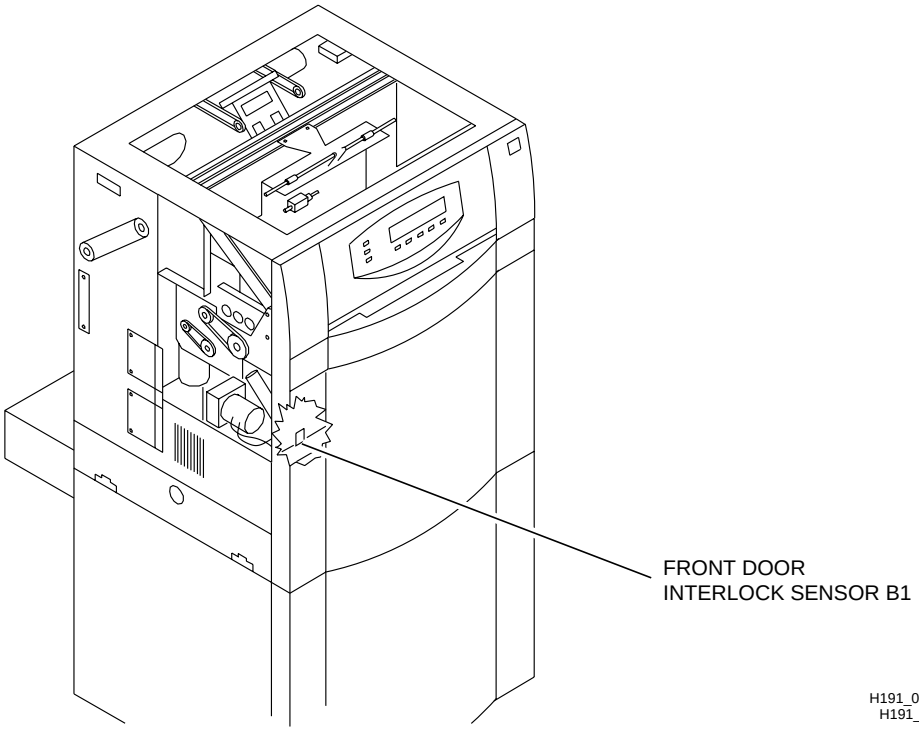
[10] Set the DIP SWITCHES. See the figure on Page 12.

Settings for DIP SWITCHES									
S1-1	**S1-2**	**S1-3**	**S3-1**	**S3-2**	**S3-3**	**S4-1**	**S4-2**	**S4-3**	**S4-4**
See Note	See Note	OFF	OFF	ON	ON	OFF	OFF	OFF	OFF

Note

Use the same setting as on the old MAGAZINE INTERFACE BOARD A4.

[11] Energize the MINILOADER.



Warning

- Dangerous Voltage
- The FRONT DOOR INTERLOCK SENSOR B1 must be actuated before upgrading the OPERATING SOFTWARE.

[12] Use a MAGNET to actuate the FRONT DOOR INTERLOCK SENSOR B1.

Important

It might not be necessary to download all the OPERATING SOFTWARE to the MINILOADER.

[13] Use the LAPTOP COMPUTER to download the current version of OPERATING SOFTWARE from Step 1 on Page 6 to the new MAGAZINE INTERFACE BOARD A4.

[14] Check for the correct value of the phase current. See “Checking the Operation” on Page 11.

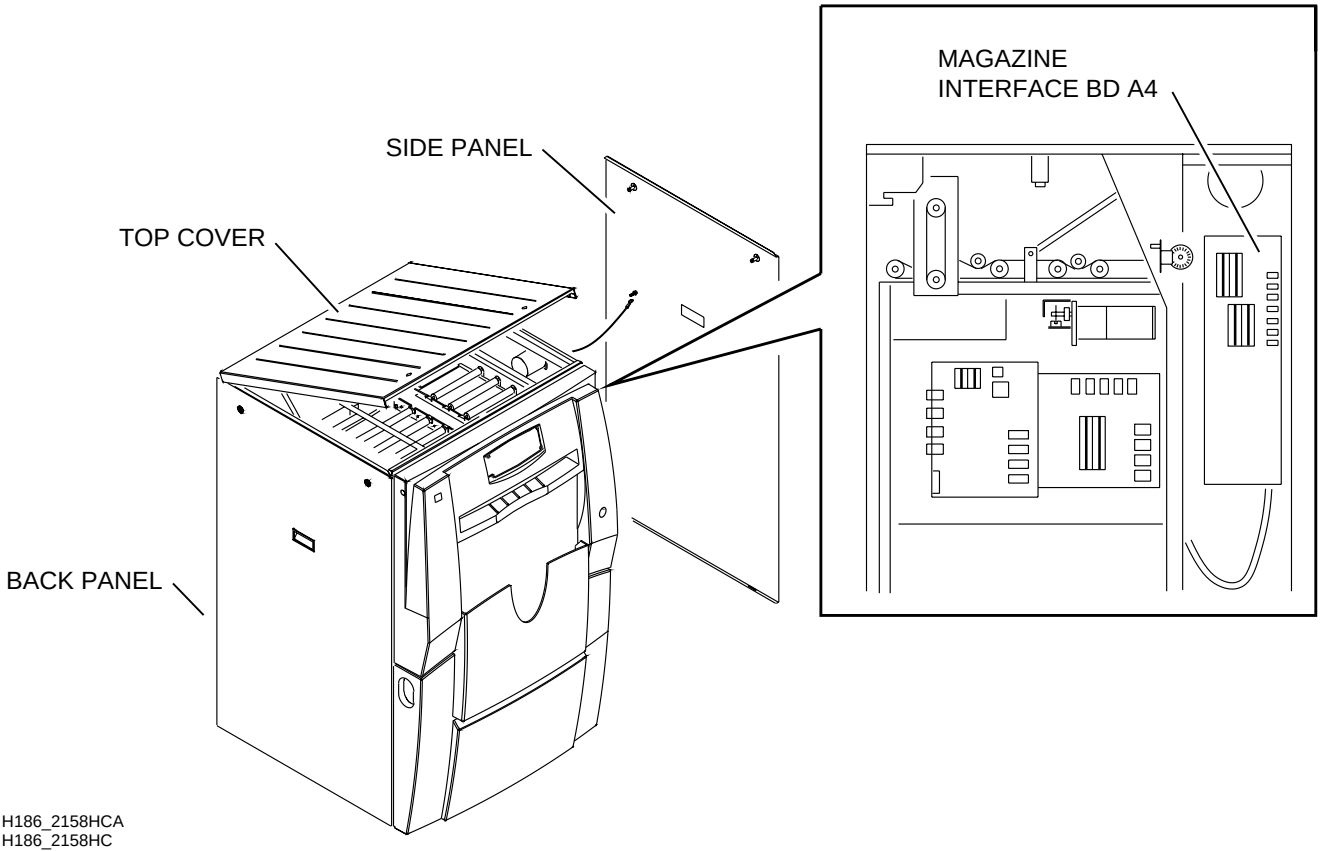
In a MULTILOADER 7000

[1] Check the version of OPERATING SOFTWARE installed in the MULTILOADER 7000.

Warning

Dangerous Voltage

[2] De-energize the MULTILOADER.



H186_2158HCA
H186_2158HC

[3] Remove:

- TOP COVER
- SIDE PANEL
- BACK PANEL

Note

See ADJUSTMENTS AND REPLACEMENTS 5E9999.

[4] Locate the MAGAZINE INTERFACE BOARD A4.

[5] Disconnect:

- CABLES
- CONNECTORS

Important

Do not discard the hardware.

[6] Remove and discard:

- MAGAZINE INTERFACE BOARD A4
- DFF CABLE - if a *Kodak X-Omat* MULTILOADER 7000 DARKROOM FILM FEEDER is installed

[7] Install the new MAGAZINE INTERFACE BOARD A4 using the existing hardware.

Important

DIP SWITCHES 1-1, 1-2, and 3-4 are not used.

[8] Set the DIP SWITCHES. See the figure on Page 12.

Settings for DIP SWITCHES							
S1-3	**S3-1**	**S3-2**	**S3-3**	**S4-1**	**S4-2**	**S4-3**	**S4-4**
ON	ON	ON	ON	OFF	OFF	OFF	OFF

[9] Connect on the new MAGAZINE INTERFACE BOARD A4:

- CABLES
- CONNECTORS

[10] Set the JUMPERS for SENSOR B35:

From:	To:
A4X3	2-3
A4X34	any one
A4X35	2-3

Warning

Dangerous Voltage

[11] Energize the MULTILOADER.

Important

It might not be necessary to download all the OPERATING SOFTWARE to the MULTILOADER.

[12] Use the LAPTOP COMPUTER to download the version of OPERATING SOFTWARE from Step 1 on Page 9 to the new MAGAZINE INTERFACE BOARD A4.

[13] Check for the correct value of the phase current. See “Checking the Operation” on Page 11.

Checking the Operation

ESD
Possible damage from electrostatic discharge.

[1] Check the FILM POCKET STEPPER MOTOR M10 on the MAGAZINE INTERFACE BOARD A4 on Page 13 by connecting the DIGITAL VOLTMETER to:
- P21 GND
- P1

[2] Use the Service Software:
- **(a)** Select “Change Parameter”.
- **(b)** Do a “Scan Run”.

[3] Energize the FILM POCKET STEPPER MOTOR.

[4] Check for a voltage of 0.400 V DC +/- 0.005 V DC at:
- P1
- P21 GND

[5] If necessary, adjust R38 to 0.400 V DC +/- 0.005 V DC with the MOTOR energized.

[6] Check the PROCESSOR INTERFACE MOTOR M13 on the MAGAZINE INTERFACE BOARD A4 on Page 13 by connecting the DIGITAL VOLTMETER to:
- P21 GND
- P2

[7] Use the Service Software to energize the PROCESSOR INTERFACE MOTOR M13.

[8] Select:
- “Component Test”
- “On” from “Interface Motor (M13)”

[9] Check for a voltage of 1.8 V DC +/- 20 m V DC.

[10] If necessary, adjust R28 to 1.8 V DC +/- 20 m V DC.

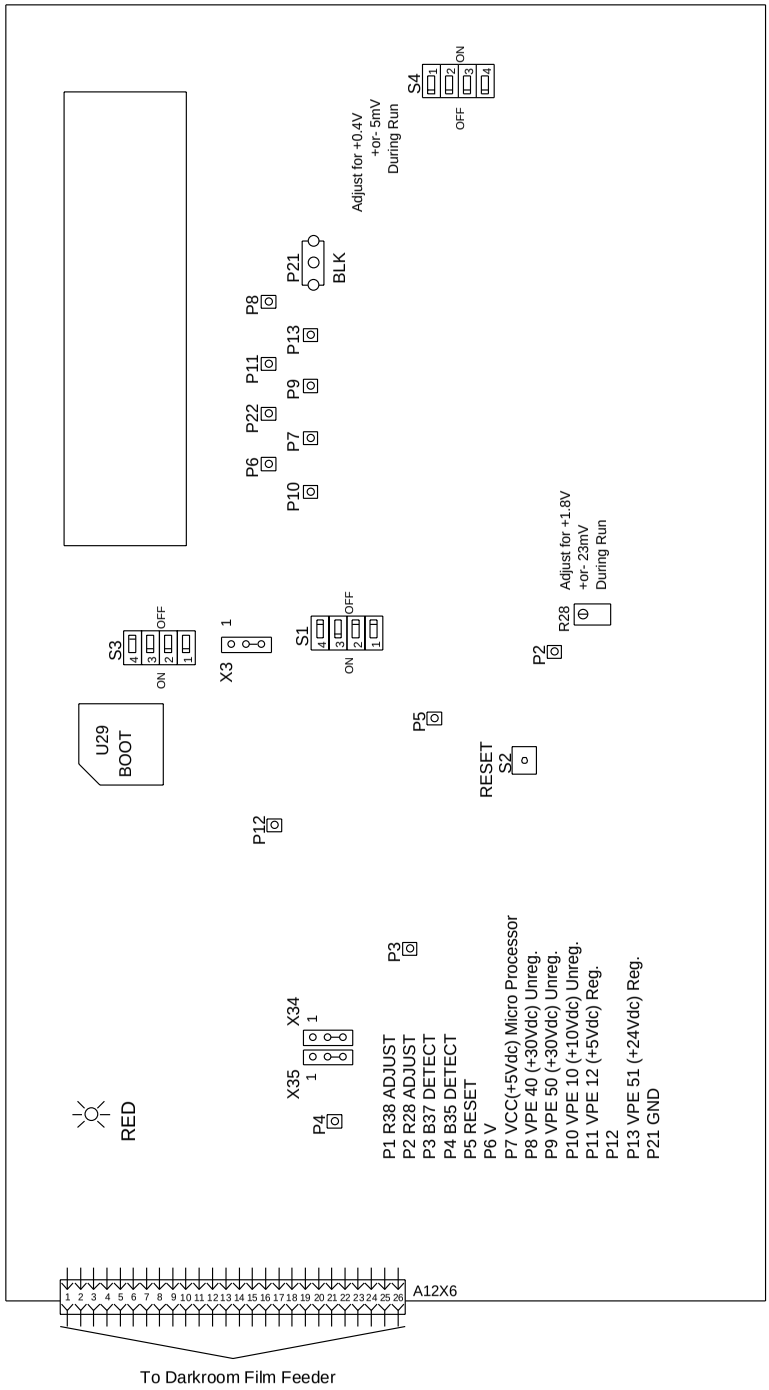
[11] Exit the Service Software.

[12] Assemble the equipment.

[13] Check that the equipment operates correctly.

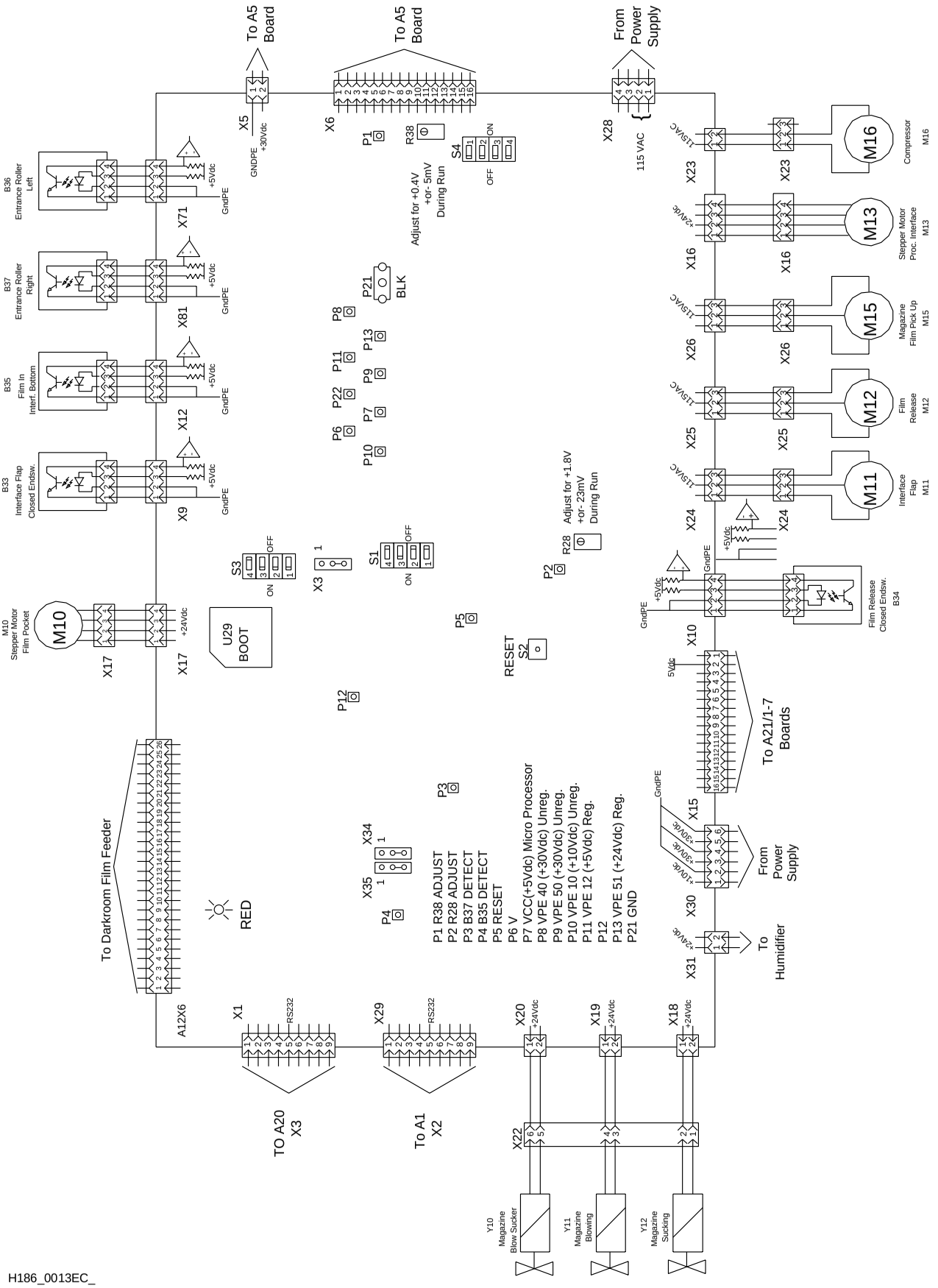
[14] Remove and keep the diagram on Page 13 for:
- MULTILOADER 300/300 PLUS
- MINILOADER 2000/2000P

Replacement BOARD A4 for the MULTILOADER 300/300 PLUS and MINILOADER 2000/2000P
Existing BOARD A4 for the MULTILOADER 7000



H186_0038EC_

Replacement BOARD A4 for the MULTILOADER 300/300 PLUS and MINILOADER 2000/2000P
Existing BOARD A4 for the MULTILOADER 7000



Publication History

Publication Date	Publication No.	ECO No.	Changed Pages	File Name	Notes
31OCT02	1F2730	---	All	1f2730.fm	New Publication

Kodak and *X-Omat* are trademarks.

Printed in U.S.A. • 1f2730.fm

EASTMAN KODAK COMPANY
Rochester, NY 14650

HEALTH IMAGING